

# Applied Qualitative Research Methodology

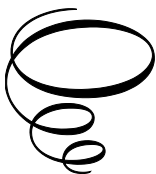


# Applied Qualitative Research Methodology

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## PREFACE

Research in health sciences is a basic component of delivering high-quality services that improves public health. A comprehensive understanding of health issues requires an in-depth exploring of individuals' lived experiences with any kind of suffering and illness, and the unique needs for enhancing their well-being. As is known, qualitative research has a crucial role in generating practical knowledge and informing evidence-based health policies while quantitative research merely provides essential statistical insights.

The book *Applied Qualitative Research Methodology* is designed to introduce researchers to the basic principles of qualitative research that highlights its valuable contributions to health sciences. It provides a comprehensive framework for guiding researchers through the entire qualitative research process—from study design to data collection, analysis, and interpretation. The framework is developed according to the most recent and reliable sources in qualitative research and the content is systematically structured across twelve chapters with a final glossary. Each chapter has initiated with a precise definition of specific terms and the expected learning objectives.

Key characteristics of qualitative research and quality assessment criteria for qualitative studies are thoroughly discussed. The book also explores various data collection techniques and widely used qualitative methodologies, including qualitative content analysis, grounded theory, phenomenology, action research, critical ethnography, historical research, and mixed-methods research. Furthermore, ethical considerations in qualitative research are extensively examined, along with responses to common questions in the field.

The authors have meticulously outlined the step-by-step process of conducting qualitative studies by sharing their scientific and practical expertise to enhance readers' understanding of these methods. We hope this book could serve as an applicable scientific resource for researchers, providing with the necessary tools to enable them conducting high-quality

qualitative research and contributing to the development of knowledge in this domain.

Prof. Dr. Hamidreza Khankeh

# INTRODUCTION

As a researcher rooted in the quantitative traditions of neuroscience, I have long appreciated the power of data-driven inquiry. Yet as the frontiers of scientific exploration increasingly converge with the lived experiences of patients, practitioners, communities, and researchers themselves, the need for rigorous and nuanced qualitative perspectives has never been more apparent. *Applied Qualitative Research Methodology* arrives at exactly the right time—offering a practical, accessible, and deeply insightful resource for anyone seeking to engage with qualitative research, regardless of disciplinary background.

My longstanding interest has always been in improving the rigor, robustness, and overall quality of research methods. Until now, this focus has primarily concerned quantitative approaches. This book has opened up a new and compelling dimension for me—highlighting how standards of excellence can and must be pursued within qualitative inquiry.

What makes this book truly remarkable is its ability to demystify the often abstract world of qualitative inquiry. Each chapter introduces key methodologies—ranging from Focus Group Discussions, Qualitative Content Analysis, and Grounded Theory to Phenomenology, Ethnography, Action Research, and Mixed Methods—presented with clarity and precision, and firmly grounded in real-world healthcare contexts. The authors not only explain philosophical foundations but also walk the reader through each stage of the research process, providing practical tools and examples drawn from years of research, teaching and supervision. As someone new to qualitative methods, I found this structure both reassuring and empowering.

Importantly, this book does not assume prior expertise. Its clear language, thoughtful organization, and engaging tone make it especially valuable for students and researchers who are exploring qualitative research for the first time. At the same time, its depth and rigor ensure that even seasoned qualitative scholars will find new insights and useful frameworks.

With its multidisciplinary relevance and strong academic foundation, *Applied Qualitative Research Methodology* is more than just a textbook—

it is a guide, a mentor, and a bridge between disciplines. Whether one is based in the laboratory, the clinic, or the field, this book is an essential companion for navigating the complexities of human experience through qualitative inquiry. It is an essential and timely resource for anyone committed to conducting meaningful, methodologically sound research—whether in healthcare, the social sciences, or beyond.

Prof. Dr. Ulrich Dirnagl



# CHAPTER ONE

## FOUNDATIONS OF QUALITATIVE RESEARCH

HAMIDREZA KHANKEH  
SHOKOUFEH AHMADI  
MARYAM RANJBAR

### Definition of Terms

**Paradigm:** The paradigm refers to the philosophical principles and assumptions that shape individuals' perspectives on phenomena and the world, guiding their actions in personal, scientific, and social contexts.

**Qualitative Research:** These studies, also known as the qualitative paradigm, are a group of research methodologies that attempt to deeply understand people's experiences, perceptions, and perspectives in order to perceive deeply and comprehensively human phenomena. In this group of studies, the emphasis is on the subjective aspect of the phenomenon, the data are generally non-numerical, and the results of the study are a deep and subjective description of the phenomenon.

### Learning Objectives

At the end of this chapter, the reader is expected to:

1. Define a research paradigm.
2. Understand the principles of positivist, post-positivist, interpretive, and critical paradigms.
3. Know the common characteristics of qualitative research.

4. Explain the differences between qualitative and quantitative research.
5. Describe the characteristics of qualitative researchers.
6. Explain how to choose a methodology in qualitative research.
7. Understand how to assess quality in qualitative studies.

## Introduction to Qualitative Research

The term 'research' refers to the pursuit of truth. It encompasses a systematic and organized effort to understand phenomena, solve problems, answer questions, and expand the boundaries of science and knowledge. (Stevenson 2010). The foundation of any research is the philosophical assumptions that form its underlying paradigm. Since paradigms play a decisive role in the choice of research method and how it is conducted, researchers must be aware of the paradigms they implicitly use in their studies (Creswell and Poth 2016, Chapter 3). In this chapter, we will first discuss the concept of a paradigm and some underlying paradigms in research methods, and then we will focus on qualitative research and its essential characteristics.

### The Concept of Paradigm and Types of Paradigms

A paradigm refers to the philosophical principles and assumptions that shape individuals' perspectives on phenomena and the world, guiding their actions in personal, scientific, and social contexts. It encompasses the entire framework of a thought system, including fundamental assumptions, key questions, objectives, and methods of conducting research. It's important to note that paradigms are not necessarily scientific truths but are scientific claims that gain acceptance as they become more convincing (Alele and Malau-Aduli 2023, Chapter 1). To examine paradigms, three main axes have been introduced: ontology, epistemology, and methodology:

- **Ontology:** An individual's beliefs about the form and nature of reality (objective and subjective).
- **Epistemology:** Assumptions about how knowledge is acquired and the relationship between the researcher and what is studied.
- **Methodology:** A set of practical guidelines based on ontological and epistemological assumptions for conducting research. (Alele and Malau-Aduli 2023, Chapter 1)

The following section elaborates on four major paradigms in science: positivism, post-positivism, interpretivism, and critical, and how they

influence research methods (Tracy 2024, Chapter 3)

### □ **Positivist Paradigm**

Positivism or objectivism, also known as the realist paradigm, has the following characteristics:

- Ontologically, it assumes that an external reality independent of individuals exists, which is researchable and understandable.
- Epistemologically, it believes in objectivism. Phenomena are independent of the researcher's observation. To avoid bias, the researcher should distance themselves from the study subjects and participants, not letting their own thoughts interfere with their observations.
- Methodologically, positivist researchers primarily favor quantitative approaches and methodologies (Speziale et al. 2011, Chapter 1-2) They typically begin with a hypothesis or research question, which they use to test theories and hypotheses, generally proceeding from the whole to the part, following the hypothetico-deductive model.

Positivists believe in the existence of general laws and order and seek to discover systems, general patterns, and generalizable laws. They have a structured and predetermined plan to explore cause and effect, use objective tools for observation, measurement, and prediction of phenomena, and strive to create tangible knowledge and principles that can be generalized to similar phenomena (Holloway and Galvin 2023, Chapter 2)

### □ **Post-Positivist Paradigm (Post-Empiricism)**

Post-positivism is a reformative movement in response to the critiques of the positivist paradigm.

- Ontologically, like positivists, post-positivists believe in a singular reality and seek to discover cause-and-effect relationships in phenomena with regular patterns.
- Epistemologically, they acknowledge that human phenomena exist not only in the real world but also in the human mind. They also believe that human methods in science are inherently weak and biased, so human understanding of the truth is inherently incomplete and partial (Speziale et al. 2011, Chapter 1-2). Methodologically, qualitative research methods are considered alongside quantitative methods. This is because there is a belief that human behavior cannot be understood without referring to the meanings and purposes of human actors, although the status and importance of qualitative methods in post-

positivism are not comparable to the interpretive paradigm (Tracy 2024, Chapter 3)

### □ **Interpretive/Constructivist/Subjectivist Paradigm**

- In the ontological aspect of the interpretive paradigm, the assumption is that no single, observable reality exists, and reality is not independent of the individuals who create it. There are multiple realities or multiple interpretations of a single phenomenon, and the world is a composite construct of these various realities (Holloway and Galvin 2023, Chapter 2). Epistemologically, unlike the positivist paradigm, there is a belief in subjectivity, and the researcher believes that personal, cultural, and historical experiences affect their interpretations. Their goal is to interpret others' meanings of the world and provide an interpretation of what is found in research, influenced by the researcher's background and experiences (Creswell and Poth 2016, Chapter 3).
- From a methodological perspective, interpretivists generally use qualitative research methods. Qualitative researchers use an inductive approach (from specific to general), which contrasts with the hypothetico-deductive approach of positivism. They rely on description, explanation, and interpretation to elucidate phenomena (Speziale et al. 2011, Chapter 1-2).

### □ **Critical Paradigm**

In research based on the critical paradigm, the research question revolves around power: who has power, how it is possessed, and how the current distribution of power in society is structured (Speziale et al. 2011, Chapter 1-2). The researcher aims to empower oppressed individuals to overcome the limitations imposed on them in terms of race, class, and gender (Creswell and Poth 2016, Chapter 3).

- Ontologically, the reality that is assumed to be comprehensible is a flexible reality, which is currently, inappropriately, considered immutable and natural. Reality is constructed by those in power, with minorities having little role in its construction. Maintaining imbalanced power relations necessitates injustice, suppression, subjugation, and exploitation of minorities (Speziale et al. 2011, Chapter 1-2).
- Epistemologically, there is a stance between subjectivism and objectivism, and the interaction between the researcher and the minority group aims to change social conditions, similar to a mental relationship in the interpretive paradigm.

- Methodologically, although this paradigm criticizes both the positivist and interpretive paradigms—viewing the positivist paradigm as aligned with those seeking to dominate humans and nature— It is still under the qualitative paradigm. There is a belief that social research should be reflective, meaning it should critique itself while studying the subject and necessarily be political (Rehman and Alharthi 2016, 51-59)

## **The Need for Qualitative Research**

The evidence suggests that in the past, due to the success of quantitative methods in measurement, analysis, replication, and creation of practical knowledge, scientists generally recognized only quantitative methodology as scientific research methods and a source of real science. However, the limitations of quantitative methods in measuring certain phenomena, especially human-related phenomena, marked the beginning of qualitative research (Speziale et al. 2011, Chapter 1-2). Furthermore, in quantitative methods, efforts are made to find the relationship between variables through various means such as creating control groups and conducting statistical tests. However, despite all controls, it is challenging to prevent the influence of interests, preferences, and social and cultural backgrounds on the research and its findings. These factors affect the formulation of research questions and hypotheses, the choice of study method, data interpretation, and the relationships among variables. (Hennink et al. 2020, Chapter 1). Another limitation of quantitative methods is their inability to describe aspects of values, culture, and human relationships. In this regard, Krasner states that the early philosophers claimed that “human phenomena could not and should not be reduced to mathematical formulas” (Speziale et al. 2011, Chapter 1-2).

The use of qualitative methods for studying human phenomena originates in psychology and the social sciences (Flick 2022, Chapter 1). In health sciences, these methods have gained prominence due to the limitations of quantitative approaches in addressing certain complex clinical questions, particularly those involving human subjectivities and interpretation (Al-Busaidi 2008, 11, Chapter 11). Health science professionals have recognized that research participants are more than mere data points (Holloway and Galvin 2023, Chapter 2). To fully understand health events, illnesses, and the ways individuals cope with health issues, it is essential to explore the lived experiences of clients within their living and working environments (Speziale et al. 2011, Chapter 1-2). Consequently, qualitative research prefers the term “participant” over “sample” because these studies are inherently participatory

and grounded in the experiences of the participants.

## Essential Characteristics of Qualitative Research

Qualitative research holds the belief that understanding human experiences is as important as explaining, predicting, and controlling them (Khankeh et al. 2015, 635-641). Qualitative research methods aim to describe and interpret complex human phenomena. These types of research have some essential and common characteristics, which help provide a clear picture of the place of qualitative research in the broad field of health system research and clarify the concepts that guide these studies. Table 1-1 presents the characteristics of qualitative research and its differences from quantitative methods (Speziale et al. 2011, Chapter 1-2).

Table 1-1: Differences between Quantitative and Qualitative Research

Aspect	Quantitative Research	Qualitative Research
Goal and Objective	Searching for causal explanation, prediction, and control, hypothesis testing	Discovery, description, and deep understanding of phenomena, generating theory from data
Nature of Reality	Belief in a single, objective reality, independent of the researcher	Multiple realities, subjective and constructed by participants and researchers, or socially constructed
Relationship Between Researcher and Research	The researcher is separate from the research process	The researcher is part of the research process
Sampling	Based on probabilistic methods, random sampling, and a defined sampling framework	Flexible, purposive, and theoretical sampling
Method	Context-independent, in a laboratory setting, artificial or controlled	Context-bond, often in natural settings
Data Collection	Using standardized and structured tools like questionnaires, standardized structured interviews	In-depth interviews, observation, and the use of documents, images, and films
Data Analysis	Statistical analysis	Conceptual analysis, constant comparison
Findings	Measurable results	Stories, ecological, theory

Reporting	Includes statistical analysis	Includes rich narratives and stories
Data Validity and Reliability	Internal/external validity, reliability, and generalizability to similar phenomena	Credibility, dependability, confirmability, and transferability
Role of Contextual Factors	Independent of contextual factors Context-free	Dependent on contextual factors Context bond

This table outlines the fundamental differences between quantitative and qualitative research methodologies, highlighting their objectives, the nature of reality they consider, sampling methods, data collection and analysis techniques, nature of findings, report style, and their approach to validity and reliability of data, as well as the role of contextual factors in each research type.

**Belief in Multiple Realities:** Unlike quantitative researchers, qualitative researchers decline the notion of a singular or universal reality regarding phenomena. Instead, they believe that humans perceive and experience phenomena differently based on their unique previous experiences and social interactions. Consequently, multiple realities exist for any given phenomenon, as individuals have varying experiences and interpretations of the same events (Speziale et al. 2011, Chapter 1-2).

**Subjective Data:** Qualitative methods deal with the subjective aspects of phenomena and aim to deeply understand these phenomena based on participants' experiences and perceptions. The goal is to uncover the internal aspects of phenomena and understand the participants' own perceptions of the studied phenomenon (Holloway et al. 2023, Chapter 2). Empirical scientists argue that studying any phenomenon should be free of subjectivity, asserting that objectivity is essential to discovering the truth. However, human-centered researchers contend that objectivity in empirical definitions is unattainable and that no human activities can be conducted without some degree of subjectivity. They openly embrace the influence of subjectivity in the research process. Kerlinger states, "The procedures of science are objective and not the scientists", meaning researchers, like all people, have perspectives, hypotheses, frameworks, presuppositions, and scientific backgrounds, and even if the findings are from a statistical study, the interpretation of statistical data is not free from the beliefs and biases of the researcher (Speziale et al. 2011, Chapter 1-2). It is recommended that qualitative researchers identify and write down all their thoughts, beliefs,

and presuppositions about the phenomenon before and during the research. This helps them become aware of their subjectivity and beliefs and discover how these affect the research process, aiming to minimize their influence on the research process to ensure that the real experiences of participants guide the research and to prevent the impact of the researcher's judgments and interpretations in the research process (Lindgren et al. 2020, 103632, Chapter 3)

**Adherence to Participants' Perspectives:** In qualitative research, participants play a crucial role in the discovery and understanding of the phenomenon by describing their experiences and perceptions in their own words. These experiences and perceptions are not collected through the usual tools of positivist approaches and quantitative methods but through qualitative data collection methods, such as unstructured interviews and observations. This approach facilitates an understanding of the phenomenon from the perspective of those who experience it. Qualitative researchers aim to understand people's individual experiences and perceptions with the utmost respect for their personal space and need sufficient time to build trust-based relationships to minimize obvious changes in participants' behavior (Speziale et al. 2011, Chapter 1-2)

**Researcher Participation in the Research Process:** Unlike quantitative research, where social interactions of the researcher are considered an intervening variable and there is an emphasis on the researcher being separate from the research process, objective, and completely unbiased, in qualitative research, a researcher is a research tool and part of the study (Flick 2022, Chapter 1). In these studies, the emotions, reflections, and values of the researcher are an integral part of the research and form part of the interpretation. The researcher is an observer, interviewer, and interpreter, and their impact on the research process is generally acknowledged (Speziale et al. 2011, Chapter 1-2).

**Selection of Participants:** In qualitative research, because participants play an active role in the research, terms like “participant” or “informant” are used. The aim of this type of research is not intervention, control, and generalizability but rather to understand and comprehend the phenomenon under study. Therefore, unlike quantitative research, the selection of individuals is not random but based on individuals' firsthand experience of the phenomenon, culture, and social processes. In general, the selection of participants in all qualitative studies is purposive (Rai and Thapa 2015, 8-15). In addition to purposive sampling, in qualitative research with a grounded theory methodology, there is another type of participant selection,

where sampling and data collection are done according to the needs of the developing theory, known as theoretical sampling (Morse et al. 2016, Chapter 3). Further details on types of sampling are discussed in Chapter Two.

**Literature Review:** The use of literature review in quantitative research differs from qualitative research. Quantitative research often begins with a review of past studies on the phenomenon of interest. The research question may be revised based on the literature review. Additionally, past research is used to prove the importance, necessity, and knowledge gaps. The research method may also be determined or modified based on the literature review. The review helps write the theoretical framework, discussing the phenomenon under study and comparing it with similar cases. In qualitative research, the literature review may occur in two stages: before starting the research and after data analysis. Regarding the literature review before starting the research process, there are two perspectives; Some researchers, such as Glaser, recommend not reviewing past research to avoid introducing bias and preconceptions into the researcher's mindset. This approach helps prevent the researcher from inadvertently guiding interviews, data collection, and analysis in a way that aligns with their own beliefs (Speziale et al. 2011, Chapter 1-2). Others, like Morse, Corbin, and Charmaz, believe that “it is unreasonable to reinvent the wheel.” A preliminary review of past research leads to more focused research on the phenomenon and recognizes that the researcher's mind is not a blank slate, and starting research without any ideas is not endorsed (Holloway and Galvin 2023, Chapter 2).

Similar to quantitative studies, a review of past research after data analysis in qualitative studies seems necessary, not to prove or refute current research findings but to compare them with previous findings about the phenomenon (Speziale et al. 2011, Chapter 1-2).

**Setting as a Data Collection Site:** In qualitative studies, researchers try to get as close as possible to the individuals under study. The setting is the place where data for qualitative research is collected and where participants experience and live the phenomenon (Creswell and Poth 2016, Chapter 3). For example, a researcher interested in studying self-immolation among girls in Kermanshah (Iran) should visit their living environment and familiarize themselves with the culture and context of the phenomenon.

**Inductive Reasoning:** Qualitative research methods are inductive. Inductive reasoning starts with details from experiences and moves towards a broader picture of the phenomenon (Speziale et al. 2011, Chapter 1-2). In

other words, qualitative researchers move from specific to general and from data derived from real experiences of participants to theory or a deep description of the phenomenon (Holloway and Galvin 2023, Chapter 2). In contrast, quantitative research methods use deductive reasoning, moving from general to specific, often starting with a hypothesis about the phenomenon and seeking to confirm the hypothesis or theory. The findings of this type of research are ultimately used for the prediction and control of phenomena (Speziale et al. 2011, Chapter 1-2)

**Flexibility in Conducting Qualitative Studies:** In quantitative methods, the study design and data collection method are predetermined and fixed. In contrast, qualitative research does not simply adhere to a set of predefined guidelines. Instead, it emphasizes the researcher's engagement with the research process to gain insights and develop new understandings. Qualitative researchers recognize that human behavior is not always logical or predictable, and the social world is not orderly or logically structured. Therefore, the research method may not be precisely designed from the outset (Holloway and Galvin 2023, Chapter 2). Additionally, some research questions may require the use of multiple qualitative methodologies or data collection methods, which may evolve depending on the research question (Rutberg and Bouikidis 2018, 209-213).

**Commitment to Minimizing Harm and Intervention in the Research Setting:** A key feature of qualitative research is the effort to minimize disruption to the natural environment or setting of the phenomenon being studied. For instance, in ethnography, the researcher aims to observe a particular culture without causing interference. However, it is unlikely that the presence of an unfamiliar person in individuals' living environments would not influence their interactions and activities (Queirós et al. 2017, 376).

**Use of Quotes, Reports, and Narratives:** Qualitative researchers use methods like interviews and observations to immerse themselves in the world of the participants and understand their experiences (Holloway and Galvin 2023, Chapter 2). The main part of the findings consists of the participants' experiences presented in the form of quotes, reports, and narratives, which contribute to the power of the research report and the understanding of the experiences and context in which the study was conducted. The longer a researcher stays in the field and the better they know the participants, the deeper their understanding of the meanings of experiences and perceptions of the participants becomes (Speziale et al. 2011, Chapter 1-2).